

**Genetics**  
**Chromosomes**

Name:

Period:

Use Chapter 6, Section 3 to help you answer the questions below.

**Section 3: Meiosis (p.188)**

1. What is genetic information made of? \_\_\_\_\_
2. Genetic information comes from one parent in \_\_\_\_\_ reproduction.
3. Genetic information comes from two parents in \_\_\_\_\_ reproduction.
- \_\_\_\_\_ 4. In sexual reproduction, how much genetic information do offspring get from each parent?
  - a. all the genetic information
  - b. twice the genetic information
  - c. half of the genetic information
  - d. most of the genetic information
5. Genetic information is found on structures called \_\_\_\_\_.

**Chromosome Numbers (p.188)**

6. There are usually \_\_\_\_\_ chromosomes in human body cells.

**Homologous Chromosomes (p.189)**

7. Organisms that reproduce sexually have \_\_\_\_\_ kinds of cells.
- \_\_\_\_\_ 8. What pairs of chromosomes in body cells carry the same sets of genes?
  - a. homologous genes
  - b. homozygous genes
  - c. homozygous chromosomes
  - d. homologous chromosomes
9. Homologous chromosomes have the same \_\_\_\_\_, but the \_\_\_\_\_ for the genes may be different.
10. Look at the homologous chromosomes in Figure 2. In this example, each chromosome carries the same 8 genes. However, three of the genes have alleles (versions) that are not exactly the same. List the pairs of letters for the genes that have one dominant and one recessive allele below.

pair #1—

pair #2—

pair #3—

**Chromosomes in Reproduction (p.189)**

11. Before an organism can reproduce sexually, it must make \_\_\_\_\_.
12. Sex cells have \_\_\_\_\_ copy of each chromosome. This means that they have \_\_\_\_\_ copy of each gene.
13. Female sex cells are called \_\_\_\_\_, and male sex cells are called \_\_\_\_\_.
14. When an egg cell and a sperm cell combine, \_\_\_\_\_ has happened.
15. Look at Figure 3. How many chromosomes does a human egg cell have? \_\_\_\_\_
16. Look at Figure 3. How many chromosomes does a human sperm cell have? \_\_\_\_\_
17. Look at Figure 3. How many chromosomes will the body cells of the human baby have? \_\_\_\_\_

